Volume 75 Article 6

1-1-1988

The Education of Iowa State Foresters: Has It Been Worthwhile?

George W. Thomson
Iowa State University

THE EDUCATION OF IOWA STATE FORESTERS: HAS IT BEEN WORTHWHILE?

by George W. Thomson
Professor

Everything that enlarges the sphere of human power, that shows man he can do what he thought he could not do, is valuable.
Samuel Johnson

In the halcyon days of forestry when the first of the great American conservation movements was in full flower there was seldom heard such a question as, "What good is a forestry student and his teacher?" Such a question would have been no more likely than, "What good is a baby?" It was understood that it was the undergraduate who, upon ending his, and occasionally her, collegiate career carried the burden of putting Old World forestry theory into American practice.

THE DAY OF THE GENERALIST

The entire spectrum of curriculum planning and course design was initially focused on making the forestry graduate into a jack-of-all-trades. Even the composition of forestry faculty came from the concept that anyone could teach anything. While most faculty members held an M.S. (or, more often, a Master of Forestry) degree it was relatively uncommon to find many Ph.D.s on forestry school faculties until the early 1940's. It is no wonder that it was once assumed that the B.S. degree was all the formal education that a young forester needed.

Although jobs in conservation within the natural resource areas seldom have been more abundant than the supply of professionals waiting to fill them, the forestry graduate of those earlier times prior to World War II could be fairly comfortable in the notion that the U.S. Forest Service would take on a Junior Forester if the two or three-day "J.F." exam could be passed. From the point of graduation and passing the Civil Service exam, whether one started as scaler, cruiser or range examiner, normal progression could be expected to carry one onto Assistant Ranger, Ranger, staff officer at the Supervisor's Office and possibly on to the glorious levels of Supervisor or a staff job in the Regional and Washington offices.

This was the pattern that people of my era, the 30's and 40's, expected to follow. Most of us of that period at Iowa State College aimed for the U.S. Forest Service and hoped-for top annual salary of $6,000. Note that this was what we imagined we might get at the *far* end of our careers, not the front end, because we were innocent of the concept of inflation and most of us had done farm work for a dollar a day.

Although there was a major conservation movement at the turn of the 20th Century, when Pinchot, Theodore Roosevelt, Muir and the other actors on the stage of politics and conservation were household names, the first real emphasis on conservation came during the Dust Bowl-Great Depression-Grapes of Wrath days when the Civilian Conservation Corps, along with a host of alphabet programs, came into being under Franklin Roosevelt. It was at this time that Ding Darling, the *Des Moines Register* cartoonist and conservation activist, rose to support forestry, wildlife and soil conservation.

In this pre-"Sand County Almanac" period writers such as William Vogt, Paul Sears, Bernard DeVoto, Louis Bromfield, and many less well known, drew attention to the evils of America's vast callousness about its natural resources. It was this emphasis on awareness of proper management that began to tip course content, although not necessarily curricular content, toward recognition of the social significance of proper forest management.

FORESTRY DEEPENS AND WIDENS

It was here on the brink of World War II, the universal bench mark for all of us of that period, that forestry began to come of age. The stage was set for preparing students in areas undreamed of before, societal obligation, ethics, cost-benefit ratios, long range planning, political action, legal precedent and a host of concepts not often mentioned in dendrology, surveying and timber cruising. All of these preceded those yet far-away mysteries of computers, operations research and the marvels of environmental impact statements and the Resource Planning Act with its nearly endless succession of public hearings.

After WW II it became evident that the jack-of-all-trades professor, fondly remembered as a "generalist", the all-encompassing curriculum and the Primed-to-be-Ranger student were finished as surely as was the two-day J.F. examination. The professor had

become too general and the exam too specific. Enter now the "Prof" newly adorned as "Doctor". Enter, too, the competition for employment by those who specialized. Face the schism between undergraduate teaching and graduate student research that was to strain the fabric of collegial relations as competition for time, salary, recognition and promotion began in earnest.

IS EDUCATING THE UNDERGRADUATE WORTH THE EFFORT?

Now come the questions hot and heavy: What good is an undergraduate? Or what use in a sophisticated world is his or her teacher-adviser-mentor? Of what use is research if it is not marketable before its present net worth diminishes to nothing?

In the 84 years since Forestry at Iowa State was first identified as a recognized entity with staffing, goals and graduates differing from those of the more conventional agriculture programs 2,275 forestry undergraduates have received Bachelor of Science degrees. Peak years for graduation came after the tremendous enrollments in the late thirties when the CCC program required hundreds of foresters to administer the land rehabilitation programs.

Another peak was seen in the decade after WW II when the GI Bill encouraged many of the ten million men and women under arms to come to college. Yet another peak came in the sixties when there seemed no end to prosperity. The Forest Service, the Bureau of Land Management and the Bureau of Indian Affairs were infinitely optimistic that there would be at least ten foresters as staff people for every "line" position. This was the happy equivalent of two cars in every garage. The last great surge in enrollment came following the enthusiasm of Earth Day in the early seventies.

It's interesting that none of these peak enrollment periods were stimulated by increased demand by employers, that usually followed a year or two later. Rather, enrollment surges were initiated by the "frenzy" (there is no better word) of newspaper and magazine articles which somehow were assimilated by parents and high school teachers and debouched into the minds of the young and equally into the minds of the middle-aged men and women stultified by unrewarding activities in shops, factories, offices and farms.

Most of us who became university teachers in those subjects dealing with resource management have had to face, at the very least, a three-pronged concern. The first is to assure that the student is competent in the execution of the technical skills of the forestry profession, whether these be silviculture, mensuration, planning, manufacturing, sales, hydrology, range management, recreation, economics or whatever. To the student, those technical skills initially seem the begin-all and end-all of the educational process so that Forestry is seen as no more than the sum of those distinctive parts.

The second concern in the making of a forester lies in the conceptual "religion" of conservation as a way of weighing alternatives so as to bring about Pinchot's "greatest good for the greatest number."

The third concern is that students must recognize the principle that some part of forestry has to be made to pay for the other parts, that is, the dealing in goods and services makes one aware that "goods" may very well have to pay for less monetary "services." It is from this necessity that forestry gains its complexity and the education of foresters its magnificence.

It is my personal opinion, based on 40 years of watching more conventional agriculturists teach their young, that no undergraduate in any other profession than forestry comes out of college with such an awareness of the real problems of feeding, housing, watering and recreating a world population as do foresters. It has often struck me that an education like forestry would pay society back a hundred fold if it did no more than make such an impact on graduates as is made here and in our other schools of forestry.

GRADUATION, EMPLOYMENT AND SOCIETY'S PAYOFF

A professional school, of course, is judged by the practice, not just the promise, of its students. One can be involved in the classroom with young people for no more than a few months to come to the conclusion that the understanding of subject matter and the professionalism of students are inextricably tied to employment prospects and job satisfaction. Affectionate concern for one's students (a quite different matter than "spoon feeding") prompts one to *want* to see them successfully employed but, more than that, it is the feedback from such students that brings to life instruction and by continuing cybernetic guidance makes each succeeding class better than the one before it.

This is not intended as a paper listing the percentages of graduates that worked for government, or reached middle management in ten years or retired rich at fifty. Nor is it an attempt to distinguish the earning power differences between B. S. and Ph.D. degree holders. After all, one of the several reasons for having good undergraduates is that they have to be that before they can become graduate students earning Masters and Doctorates. From the earlier-mentioned 2,275 B.S. graduates, the 176 M.S. and the 56 Ph.D. recipients society has gotten remarkable mileage.

In *government service* our people have probably made the greatest impact in terms of numbers. All of the agencies, with primary emphasis on the U.S. Forest Service, but including the Bureau of Land Management, the Bureau of Indian Affairs, National

Park Service, Soil Conservation Service, Fish and Wildlife Service, Corps of Engineers, the Army, Navy and Air Force, have had long-time service from Iowa State foresters. Examples? Here are a few: The Chief of the entire U.S. Forest Service; five Directors of the regional Forest Service Experiment Stations; a Regional Forester who has already served in that office in two different regions; at least a dozen National Forest Supervisors. Right at this moment Iowa State foresters hold no less than 83 Forest Service administration and technical specialist positions at Ranger level and above. The staff specialists at the District level for Forest Service and Bureau of Land Management number, right now, well over 150 and through the years these positions have been occupied by Iowa State foresters in the tens of hundreds. State, county and city forestry positions in Iowa alone have absorbed more than fifty Iowa State forestry graduates and nation-wide the number is doubled. The last five State Foresters in the Iowa Conservation Commission, now the Department of Natural Resources, have been Iowa State foresters with recently retired Gene Hertel having been elected Chairman of the National State Foresters' Association.

While we have less specific records for *industrial foresters*, because there is no separate directory for them, there has been a steadily increasing number of our graduates who have either started in industrial forestry or have gravitated to this area as their experiences and inclination led them into this sometimes more lucrative area. At one time we could count 67 Iowa State Foresters in permanent positions with Weyerhaeuser Company alone in everything from land and raw material procurement, genetic research, plant management, growth research on to the various vice-presidencies in sales, research and development, and administration.

When we need summer experience for undergraduates, an annual requirement, or for graduate students or faculty, it is both exciting and gratifying to be able to telephone Iowa State forestry alumni in any part of the country and in almost any forestry - related activity and receive immediate assistance and advice. There is no resource available to this Department that is as valuable as its successful and supportive alumni. Over and over again we have called on these one-time undergraduate and graduate students for help and never have we been disappointed.

The part that Iowa State forestry graduates have played in the role of *university educators* is surprising even to us. It is nearly impossible to remember all of our graduates who have spent major portions of their careers as teachers. However, we have a verifiable count, starting with Dr. Shirley Allen at the University of Michigan and continuing to our most recent entrants to the ranks of university teaching, Dr. Reinee Hildebrandt at Kansas State University, and Dr. Douglas Stokke at Michigan Technological University that 58 Iowa Staters have held professional rank at 32 of the 47 S.A.F. accredited forestry schools in the United States. We have jokingly said that so many Iowa Staters have appeared on Oregon State University's faculty at Corvallis that the city should be called "Ames West". The total of our graduates on the faculties of so many forestry schools has included 12 department heads and 6 deans or directors, 4 of whom had also been department heads.

Few could have dreamed that the initial and long-sustained enthusiasm of the transplanted Nebraskan, G. B. MacDonald, and his beloved "Ames Foresters" would have penetrated so deeply into American education. The association between Iowa Staters and the other fine schools of forestry has been a happy and mutually beneficial one.

COMMENT AND CONCLUSION

How did this phenomenal distribution of and support by forestry professionals come about? Affection for the alma mater is not unique to Iowa State University and the support of professionals who are alumni is not unique to Forestry. Certainly the seemingly unlikely positioning of our forestry school on the edge of the Great Plains has not, in itself, been automatic proof of competence. Perhaps our success in placement and the ultimate career success of our graduates has been due to the simple fact that Midwesterners, while not all "strong, farm boys", have had an affinity for land and the manipulation of capital, labor and inventiveness that transferred easily to forestry. Perhaps this college for the working class did draw those with a strong ingrained work ethic and a tolerance for the exasperation of working with nature. This combination may have allowed those with patience and perserverence to prosper. Perhaps the sons and daughters of Iowans, themselves descended from pioneers, *expected* to leave home and the imagined romance of mountains and far places naturally attracted our people to forestry in the first place. Actually, in all my years of associating with forestry faculties around the country the question of keeping students in the home state after graduation is never discussed - nor assumed important.

There is, of course, concern among natural resource professionals over the low esteem in to which long-range management of our natural resources has fallen. Attempts to convert all effort and all resources, no matter how fragile, into immediate dollar profit has pervaded the national consciousness for more than a decade. Further, more and more of the American citizenry have drifted away from backgrounds where long range protection of a producing land resource is the natural preoccupation. There has come that mind set that Aldo Leopold referred to when he said, "There are two spiritual dangers in not owning a farm. One is the danger of supposing that

breakfast comes from the grocery, and the other that heat comes from the furnace."

This insight provided by Leopold seems to account for a national attitude that all forests should be wilderness and that it is immoral for any tree to be harvested, coal to be dug, oil to be pumped, mountains to be roaded, public range to be grazed or game to be hunted. Certainly forestry schools must now face up to giving more attention to esthetics and those forestry applications pertinent to the urban environment. Attention must be paid to the ravaging of the forest resources in countries desperately trying to convert their forests to cash, or, more often, to fuel wood and building materials for of what use is a green revolution if one's food is uncooked and one's children unhoused? The third of the World's land surface that is in forest now faces the same despoilation, and demands the same dedication and skill, that Iowa State and other American foresters applied to the forested third of the United States' land surface when it was under equally severe stress at the end of the 19th century.

Perhaps the solving of America's forest problems in the last 80 years of this small department's history was only practice for the greater challenges facing Iowans when the whole world becomes our work arena and all of the terrifying questions of exploding populations and the depletion of the globe's resources must be solved. It will be then that the true value of education for the sensitive management of our renewable resources will become apparent.